

ABSTRACT

A laser machining apparatus machines a workpiece at uniform intensity by converting a CO₂ laser beam to uniform intensity using an intensity-converting element and a phase-matching element. The optical transmission system is configured such that the starting point of the 5 laser beam pointing vector and the exit face of the intensity-converting element are mutually conjugated with respect to the optical transmission system. This structure offers stable machining by ensuring that the laser beam always enters the intensity-converting element at its center, even if the pointing vector of the laser beam shifts.